CLAIMS

We claim:

1. A magnet for use in a magnetic motor assembly, comprising:

a body having a central axis along which a portion of the body is aligned and a magnetic field having a centerline that is skewed relative to the body central axis.

2. The magnet of claim 1, including a first side that faces in a first direction and a second side facing opposite the first side, the second side including at least one surface that is oriented to be nonparallel with the body central axis.

3. The magnet of claim 2, wherein the second side surface includes edges that are nonparallel with the body central axis.

4. The magnet of claim 2, including a distance between the second side surface and the first side that varies along a length of the body.

5. The magnet of claim 4, wherein the second side surface is ramped relative to the first side.

6. The magnet of claim 2, including a plurality of surfaces on the second side, a first one of the surfaces having a constant width and a second one of the surfaces having a varying width.

7. The magnet of claim 6, wherein a distance between the first side and the second one of the surfaces varies along the width of the second one of the surfaces.

8. The magnet of claim 7, wherein the distance is greatest at a location where the second one of the surfaces is adjacent the first one of the surfaces and the distance is smallest at an edge of the second one of the surfaces adjacent an edge of the body.

9. The magnet of claim 2, wherein the first side is generally planar.

10. The magnet of claim 2, wherein the first side is curved.

11. A motor assembly, comprising:

a stator;

a rotor that rotates about a rotor axis relative to the stator; and

a plurality of magnets supported by either the rotor or the stator, each of the magnets having a body aligned parallel with the rotor axis and a magnetic field with a centerline that is not aligned with the rotor axis.

12. The assembly of claim 12, wherein each magnet includes a first side facing the stator or the rotor and a second side facing the other of the stator or the rotor, the second side of each magnet including at least one surface that is nonparallel with the rotor axis.

13. The assembly of claim 12, wherein the first side of the magnets is configured to conform to a corresponding surface on the stator or the rotor.

14. The assembly of claim 12, wherein the second side surface includes edges that are nonparallel with the rotor axis.

15. The assembly of claim 14, wherein the second side surface edges are parallel to each other.

16. The assembly of claim 12, including a distance between the second side surface and the first side that varies along a length of the body.

17. The assembly of claim 16, wherein the second side surface is ramped relative to the first side.

18. The assembly of claim 11, wherein the magnets are supported on the rotor.

19. A method of making a magnet for use in a permanent magnet motor, comprising the steps of:

forming a magnet body having a central body axis;

forming a first side of the magnet body; and

forming a second side facing opposite the first side such that the second side includes at least one surface that is not aligned with the central body axis.

20. The method of claim 19, including pressing and sintering the magnet to thereby form the body, the first side and the second side.